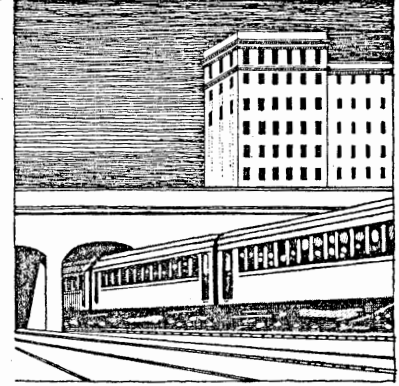
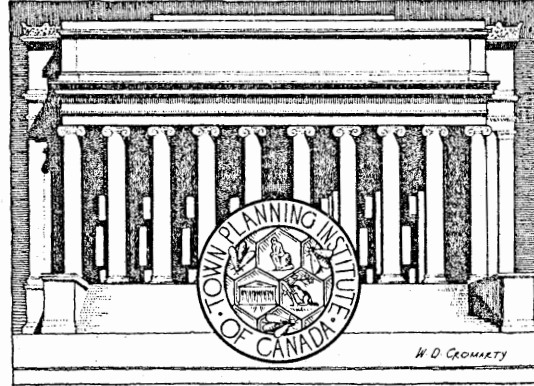


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UNIVERSITY OF BRITISH COLUMBIA VANCOUVER

In the fall of 1912 the provincial government of British Columbia called for competitive plans to develop the proposed provincial university for which purpose a site of approximately 260 acres had been allocated at Point Grey, Vancouver, commanding a magnificent panoramic view of the Pacific ocean and the mountains of the coast.

The competition was open to Canadian architects and was assessed by the following gentlemen: W. Douglas Caroe, of London; A. A. Cox, of Vancouver and S. MacLure, of Victoria, who unanimously awarded the first premium to Messrs. Sharp & Thompson, of Vancouver.

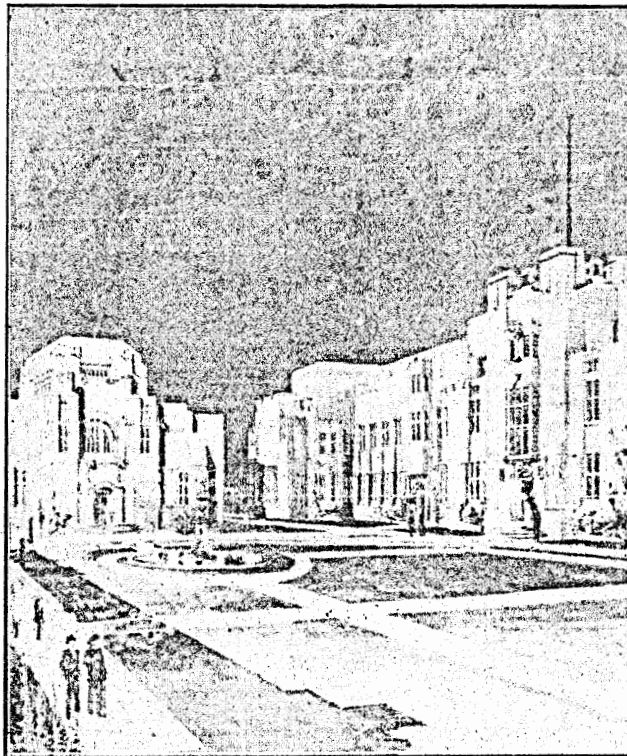
A subsequent commission of experts consisting of Warren P. Laird, Thos. H. Mawson and Richard J. Durley was appointed to examine and report on these plans. Their report stated that the winning design was conceived on correct principles and with some minor modifi-

cations would be worthy of the great opportunity such a scheme afforded. They were however of opinion that the land grant should be increased by at least 200 acres to take care properly of the farm

areas in connection with the Faculty of Agriculture. The government subsequently agreed to this suggestion and have set aside for farm purposes an additional 250 acres, making the total land grant for the university slightly more than 500 acres.

The Site

The site is an incomparably beautiful one, situated about seven miles from the city of Vancouver on a conspicuous headland of the Pacific ocean 300 feet above sea level, with superb views across the gulf of Georgia to Vancouver island on the west and to the mountains of Howe sound on the north. It is directly connected by good roads with electric cars already run-



View of Arts quad, showing style of design

ning within a mile and a half of the site. Topographically the site of the university may be described as an undulating tableland somewhat higher than the marine drive, which almost encloses

the Great War stopped any development beyond the erection of the concrete frame of this building. Several units of farm buildings have been commenced such as dairy and beef cattle barns, agronomy and horticultural barns and poultry plant.

There are now 246 acres of university land either under cultivation, in meadow or "rough cleared." The cultivated and meadow land comprises about 86 acres and is used by the various departments of the Faculty of Agriculture for experimental purposes in agronomy, animal husbandry, dairy, horticulture, poultry and husbandry. There is also an active farm department under the direct administration of the dean of the faculty.

Most of the cleared areas of land will be used for the future buildings and campus of the university and is only temporarily used for the experimental work of the Faculty of Agriculture, although the department of horticulture, the botanical gardens and some of the agricultural buildings already occupy their permanent sites. In the winter of 1920-21 the provincial government "rough cleared" about 100 acres additional to that which had been previously cleared to allow the experimental work to proceed. This was done under the government scheme of unemployed relief. These extra acres, however, cannot be used for any purpose until more clearing and levelling has been done.

The work of the various departments at the present time embraces a definite programme of research and investigational work outlined in the interest of provincial problems connected with agricultural progress. Some of this work has been under way since the farm was first started in 1914. Each year, as opportunity permits, this programme of work is enlarged to meet the more pressing requirements of the provincial agricultural problems.

The total capital investment in improved land, buildings, equipment and stock is now more than \$200,000. This includes the few permanent farm buildings already mentioned. Visitors to the university site are welcomed by members of the staff of the agricultural faculty.

Point Grey will Town Plan

By a recent amendment to section 54 of chapter 52 of the Municipal Act of British Columbia the legislative assembly has given town planning powers to the various municipalities and it is gratifying to hear that the municipality of Point Grey, in which the new university is situated, is taking immediate steps to protect itself from haphazard development by drawing up town planning by-laws in accordance with the new act. At the time the university was founded there was a keen contest among the cities of the coast to appropriate the university since aside

from the social value of such an institution it was anticipated that real estate values would also appreciate considerably by its contiguity. The municipality of Point Grey is showing excellent sense of its good fortune in adopting the proved principles of town planning for the conservation of its present values and the larger values that will be created when the university at Point Grey becomes a going concern. If it could find out some way by which these unearned increments in values could be appropriated to cover the cost of public services and not all find their way into the pockets of land speculators, Point Grey municipality might become famous.

New Town Planning Powers

In the amended act powers are given:

For fixing building lines on any land abutting on any street or road, and for providing that no building shall be erected on such land at a lesser distance from the street or road than indicated by such lines:

For entering into agreement with the owners of lands for the reserving, under conditions set out in the by-law, of any part of such lands for the purpose of making new streets and roads and the keeping of the part of such lands as set out in the agreements unencumbered by the erection of buildings:

For limiting the number of separate dwelling-houses to the acre, and providing for adequate light and air to the windows of each house:

For prescribing areas within which no buildings shall be erected for any purpose other than that of a private dwelling-house either with or without stables, private garages, coach-houses, green-houses and necessary out-buildings:

For prohibiting within any prescribed area the erection of factories, warehouses, public garages, shops and stores:

For prohibiting the carrying-on of any noxious trades or manufactures and the erection and use of any building with inadequate sanitary arrangements.

For regulating the height of fences within any area in the municipality.

These provisions indicate a rather timid beginning of town planning in British Columbia after about ten years of advocacy on the part of progressive organizations but they will undoubtedly serve the cause of better planning and will create the public opinion that will demand in time an adequate provincial town planning act.

Workmen's cottages, including bathroom and three bedrooms are being built at Nottingham, England, under the public housing scheme of the Ministry of Health, for \$1500.

TOWN AND REGIONAL PLANNING IN RELATION TO SANITATION

With Special Reference to Water Supply and Sewerage in the Toronto Region

By R. O. WYNNE-ROBERTS

The term sanitation may be used to cover all works that can be made to contribute to the amenities of the people in connection with public health, including pavements, sidewalks, water supply, refuse removal and disposal, sewerage, sewage disposal or treatment, comfort stations, baths and other public engineering necessities. The treatment of the subject will here be restricted to the problems of water supply and sewerage and to the Toronto region.

Growth of Toronto

Toronto, in common with other important centres of population, has grown from an insignificant village to a large city surrounded by considerable suburban areas. It is mere speculation to estimate what Toronto will be in say twenty years time in respect to area and population since many circumstances may tend to accelerate or to retard the growth of the city. Yet engineers must make such estimates. The true increase of a city is in geometrical and not arithmetical progression since the number of parents increases in an increasing population. Furthermore, in newer countries immigration has produced profound effects. We must carefully consider the question of growth in population before discussing regional planning.

Some Former Estimates

Mr. N. Maughan, city assessment commissioner in 1895, was of the opinion that the rate of increase of population in Toronto would be about two per cent per year. The late Mr. James Mansergh, however thought this estimate "a somewhat sanguine one" and if this forecast was "found to be correct as years go by, then the city of Toronto has indeed a prosperous and brilliant future before it." Some persons then were optimistic enough to assert that $4\frac{1}{4}$ per cent per annum, the same as between 1870 and 1882, "might not unfairly be looked forward to in the future". Others again said Toronto "would never attain such a position" as to have a population of 500,000. So Mr. Mansergh confidently considered that he was erring—if erring at all—on the side of excess when basing the city growth at two per cent per annum.

Let us for a moment compare the various estimates made by different authorities with the facts:

The following table gives the estimates and census returns:

TORONTO POPULATION

	1881	1891	1901	1911	1921
Maughan 1895	86,400	167,400	197,100	240,200	292,800
Board of Commissioners on Water Supply (1912)				(1912)	
4% increase per yr.				400,00	569,300
Civic Transportation	(1879)	(1889)	(1899)	(1914)	(1921)
Commission 1915	75,000	160,100	192,900	470,000	590,000
Dominion Census	96,000	181,000	208,000	377,000	522,700 estimated

MONTREAL

	1881	1891	1901	1911	1921
Montreal	1881	1891	1901	1911	1921
Dominion Census	155,000	220,000	268,000	489,900	607,000

The percentage increase was

	TORONTO	MONTREAL
1881 to 1891	8.8	4.2
1891 " 1901	1.5	2.2
1901 " 1911	8.1	8.3
1911 " 1921	3.9	2.4
1881 to 1921	11.0	7.3
1891 " 1921	6.3	5.1
1901 " 1921	7.5	6.3

So the sanguinity of Mr. Maughan fell far short of the actuality.

It will be well now to compare the growth of Toronto and Montreal with those of fourteen comparable United States cities:

	1886	1891	1901	1911	1921	Percentage Increase 1881-1921
Toronto	96,000	181,000	208,000	377,000	523,000	11.0
Montreal.	155,000	220,000	268,000	489,000	607,000	7.3
U.S. Cities						
Baltimore	332,000	434,000	509,000	558,000	734,000	3.0
Buffalo	155,000	256,000	352,000	424,000	507,000	5.7
Boston Ms	363,000	488,000	561,000	671,000	748,000	2.7
Cincinnati	255,000	297,000	326,000	364,000	401,000	1.4
Cleveland.	160,000	261,000	382,000	561,000	797,000	10.0
Detroit	116,000	206,000	286,000	466,000	994,000	19.0
Indiana-polis ..	75,000	105,000	169,000	234,000	314,000	8.0
Los Angeles	11,000	50,000	102,000	319,000	577,000	130.0
Milwaukee	116,000	204,000	285,000	374,000	457,000	7.4
Minneapolis	47,000	165,000	203,000	301,000	381,000	17.8
Pittsburgh	156,000	284,000	322,000	534,000	588,000	7.
St. Louis	351,000	452,000	275,000	687,000	773,000	3.
San Francisco	234,000	299,000	343,000	417,000	507,000	2.9
Washington, D.C.	177,600	230,000	279,000	331,000	438,000	3.7

These figures show that our Canadian cities compare favourably in respect to growth with the average of 5.5 per cent in the above United States cities. If Los Angeles is eliminated the growth of the other cities averages 5 per cent and if Detroit is omitted the average drops to 4.37 per cent. One industry towns are not safe indications to guide us.

If we assume an average increase of four per

cent per annum, Toronto will have 730,000 in 1931 and 1,000,000 in 1941, with an area of probably 45 and 60 square miles respectively.

Suburban Growth

While the expansion of the city of Toronto in population area and wealth has doubtless exceeded the most sanguine expectations of thoughtful men it must be remembered that the outskirts also are growing apace. Within the five miles radius of the city limits there are the towns of Leaside, Weston, Mimico and New Toronto and the townships of Scarborough, York and Etobicoke with an aggregate population of nearly 80,000 persons. The average annual increase in York township during the last six years has been about 12 per cent. What will be the population in ten and twenty years time?

Planning for Water Supply and Sewerage

The planning of our highways, streets, boulevards and parks for future growth would not have been difficult because there would not have been any serious expenditures involved as the plans would have been simply elements of subdivisions. But in the planning of water works and sewerage the case is different. These are expensive undertakings. The centre of gravity of the population in Toronto remained somewhat stationary until 1883 and the prospective spreading of the people was then not so evident as it is now. Great judgment and confidence were needed to anticipate the growth in population and expansion of area.

Annexations

The limits of the city have assumed great elasticity during the past 40 years by frequent annexations of adjoining territories. These annexations, however, tended to expensive outlays because the new areas had to have watermains and sewers as well as other improvements and utilities. One result usually experienced when annexations are made is the costly revision of the existing public works unless by city or regional planning water and sewerage works are arranged and co-ordinated. While it would appear logical for the eight municipal authorities already named to attend to their own local requirements the principle of organizing and administering public utilities on behalf of a combination of municipalities has been fairly well established in this and other countries and with satisfactory results. It has been recognized that service which is a common need should be organized by one body.

A Regional Area

Suppose a combined district were defined approximately as follows: Starting at the lake and following the west side of Etobicoke creek as far north

as the C.P.R., thence east along the railway to and north along Kipling road to Brampton road, east along Wilson avenue and Mercer avenue to the east side of east Don river, then generally following the Ridge between the Don river and Highland creek paralleling the G.T.R. south to Scarboro Junction and to the lake, this area, including the city, would measure about 120 square miles. It can of course be much reduced although as a question of policy it should be given every consideration. Now it would seem that one transportation commission would amply suffice to organize efficient electric transportation in this area. Our trunk roads in such area could be easily maintained by one authority whereas there are now ten. Light and power could be purchased and distributed in the same area by one authority at less cost than is possible by the present nine. Water supply and sewerage are now in the hands of each municipality and since we are discussing these utilities the question may be reasonably asked, what is within the range of practical politics in these matters?

Town and Regional Planning

Town and regional planning mean organising at present for the future welfare of the people. Toronto in some measure recognises this important elementary principle by undertaking great harbour and foreshore improvements; by advocating extensive transportation schemes; by building splendid university, college and school institutions; by planning parks, boulevards and playgrounds; by controlling subdivisions outside the city limits; by organising hydro-electric systems and by other methods—all of which contribute to the amenities of the people and to the building up of a great and prosperous city. Some day Greater Toronto will doubtless stretch along the lake front from Scarboro bluffs to Port Credit, a distance of about 25 miles. Millions of dollars are being spent on improvements of the water front extending over about 12 miles, and it is safe to predict that the public will support the preservation of the other 13 miles. A lake front promenade, measuring say 25 miles, would constitute a magnificent attraction to the locality.

Unified Administration

But the question is whether such a desirable consummation can be established by our present several organised civic administrations. The lake is our logical source of water supply. The quantity is unlimited. The quality is capable of being maintained at a high standard provided the discharge of sewage effluents at several outfalls is possible with due regard to its efficient dilution, diffusion and oxidation. Winds and currents often tend to create undesirable conditions unless a careful study is made

of these phenomena. Whilst we may survive without certain utilities we cannot without water. It is the primal requisite of an organised communal life. In view of what has already been stated and implied, it would seem rational that one authority instead of several should furnish water to the residents in the city and the outskirts. One authority could maintain a better service than can several, because it could afford to employ higher qualified officials, better supervision, and have a diversified consumption and probably supply at a cheaper rate. Diversified consumption has an important influence on the required capacity of water works equipment, especially for domestic and fire purposes. In smaller installations as much as 70 to 80 per cent of the capacity of pumps and mains is needed to provide fire protection, whereas in larger cities it may be less than 10 per cent.

Fire Protection and Unfair Assessment

Parenthetically, it may be stated that our method of assessing the cost of fire protection does not appear to be fair. If a fire-resisting building is erected the insurance companies will assess according to the risks involved but the municipality will assess according to the value of the building. In other words our method of taxation for fire protection constitutes a premium on cheap and risky structures. A home builder has to pay the same rate per foot frontage for a water main (if constructed under the local improvement act) regardless of whether the house is built of wood or stone. A warehouseman who erects a fire proof building at great expense and installs sprinklers and hydrants to protect his property—incidentally relieving the municipality—has to pay very much more than does the owner of say a cheap lumber celluloid factory because the assessment is based upon the relative values and not on relative hazards. Furthermore, in many municipalities the water consumer is the municipal payer for fire protection. The smallest consumer may be the one who owns the most risky structure. Indeed he may not pay for water at all and yet enjoy equal fire protection. This subject is capable of considerable discussion but the main topic must be followed.

Engineering Features of Regional Planning

The engineering features of one large water works system for Greater Toronto do not involve any extraordinary difficulties. The nucleus of such a system is already in operation and a duplicate intake, with pumps, filters and trunk mains, is described in Mr. R. C. Harris's report of 1913, in which he discusses a scheme off Victoria Park. The cost of the duplication is estimated at about \$16,000,000.

The demands on the city treasurer are great and

growing. The taxes are mounting up and it is reasonable to surmise that the city council has a problem to solve in respect of what is most urgently needed and what is within the financial resources of the municipality. If one Metropolitan water board were established with the resources of the adjoining districts placed at its disposal, the financial problem would no doubt be easier to solve. The supply of cheap and pure water to a large area would constitute a remarkable incentive to building operations which are so urgently needed.

Regional Control in Other Countries

There are arguments in favour of the city supplying water in bulk to the neighbouring municipalities. There are also arguments to advance in favour of a separate board or commission. If the city should undertake the burden the neighboring municipalities would in some measure be relieved of a considerable financial responsibility. The tendency to multiply schemes instead of concentrating is not ideal. It is manifest that regional planning in this locality involves one scheme. This principle is not new and it may be profitable to give a few examples.

The Metropolitan District Commission (Boston, Mass.) now controls the water supply of ten cities and nine towns. The water district has an area of about 175 square miles and a population of about 1,300,000, consuming about 121,000,000 gallons daily. The capital expenditure is about \$44,000,000.

Melbourne and Metropolitan Board of Works serves a large area, involving a capital expenditure of about \$24,000,000, and serving about 772,000 persons.

The Metropolitan Water Board of London (England) attends to the wants of about 7,000,000 people in an area of about 559 square miles. The capital expenditure is about \$260,000,000 and the daily supply of water about 275,000,000 gallons. This board superseded eleven companies. About 450 authorities have an interest in this undertaking.

We have a prominent example in Canada, namely the Greater Winnipeg Water District, which came into existence in 1913. This district comprises Winnipeg and seven neighbouring municipalities. Water is conveyed 85 miles from Shoal lake, through a conduit capable of carrying about 100 million gallons daily.

It is doubtless unnecessary to multiply examples.

Sewage Disposal

With regard to sewerage and sewage disposal, it may be stated that the geographical position and topographical features of this locality are such that the logical outfall for sewage effluent and storm water is in the bay. A contour map of this district

will show that the natural slope of the land within a radius of five miles of the city limits is towards Toronto, except on the west of Humber river. Pumping, of course, could be resorted to but the cost of operation would thereby be increased and it is therefore desirable to avoid pumping where possible, unless there are special reasons for so doing.

Since sewers are ordinarily operated by gravitation the outfalls in this locality have to be located near or in the city limits, and as the district becomes more densely populated the problem of maintaining a satisfactory standard of sanitation for the city and its environments and of preserving the quality of the water supply will become increasingly important. The need for sewerage in the outskirts of the city is a pressing one. Scarborough could discharge sewage or effluent into the bay, but by doing so, it would be necessary to locate the outfall so as to safeguard its own water supply on the one hand and the contemplated city's new source on the other. The township of York has no direct outlet to the lake except at Swansea. The Don river and the Humber river are, of course, available. Leaside discharges its effluent into the Don river and Weston into the Humber. The Mimico and New Toronto effluent is discharged into the bay. The eastern portion of Etobicoke will some day discharge sewage effluent into the Humber river and the western portion together with the township of Toronto and the village of Port Credit will discharge into the lake. The construction of several independent sewerage schemes and sewage treatment plants by several different authorities would seem to be inadvisable, having regard to the future expansion of the city and would be distinctly opposed to modern city and regional planning.

Regional Commission

It would not be reasonable to expect the city of Toronto to provide sewer accommodation for the many neighbouring municipalities. Neither would it be fair that the quality of the city's water supply should in any way be jeopardised now or in the future by a number of sewage works and storm water outlets discharging into the bay. The principles of city and regional planning would involve an intensive study of the whole question to ascertain what could best be done to provide sewerage facilities for the combined areas under review, and so far as it can now be seen the future efficient administration of the district in respect to sanitation will depend upon how such facilities are now organised. It may, however, be pointed out that the solution of similar problems has been found elsewhere through the agency of a representative board or commission. Indeed, it would appear logical that both water and

sewerage in this district should be organised and supervised by one board.

Melbourne and Metropolitan Board of Works previously mentioned also controls the sewers in 26 municipalities, having an area of about 91,000 acres (142 square miles). It has spent upwards of \$40,000,000 on such works. The London County Council (England) has control over about 370 miles of intercepting sewers, which drain about 150 square miles of metropolitan areas occupied by about 7,000,000 people. Such sewers have an aggregate capacity of about 814,000,000 gallons per day, apart from storm overflow to the river and the cost was about \$65,000,000. All local sewers—about 2,500 miles in length—are controlled by the many local municipal authorities. The London County Council's primary duty is to prevent sewage from entering the Thames within the area of the metropolis.

The Metropolitan District Commission (Boston) also builds and supervises sewers in 14 cities and 13 towns, an area of about 221 square miles, containing about 1,250,000 people. It has spent about \$17,500,000, on sewerage work.

The Essex Border Utilities Commission, with twelve members, was created in 1916 by a special act formulated by Ford City, Windsor, Walkerville, Sandwich, Ojibway, etc., to carry out joint trunk sewers, disposal works and water mains and to charge the cost against each municipality, in proportion to the benefit received.

The Vancouver and District Joint Sewerage and Drainage Board was created to attend to the sewerage of Vancouver, Point Grey, Burnaby, etc. The area of the district under the administration of this board is about 80 square miles and the population is about 250,000.

The Chicago Sanitary District and the North Shore Sanitary District may also be mentioned. Enough has doubtless been stated to indicate the possible lines for regional planning of the Toronto region. It must be remembered that the ratepayers in eight municipalities have the final voice in this matter, and a project such as that indicated would take a great deal of time.

Ways and Means

The questions referred to in this paper are mainly those of what principles might be adopted to serve best the interests of this locality, having regard to the prospective extension of areas and increase of population; whether the present methods are the most appropriate or whether a public body representative of all municipalities within a defined area would better suit the local conditions. If it is considered that a board or commission would be better adapted to our future development, then there are many matters which will require most careful

thought and consideration in connection with the organization of a board or commission such as number of members; duration of office; manner of election or appointment; whether independent of the municipalities in its actions; nature of the powers to be granted; method of assessment of the cost of construction and of maintenance; if existing works should be taken over and how they should be evaluated; whether water should be supplied in bulk to the municipalities or the board or commission should take entire charge; whether sewerage service should be assessed according to area, population, volume, valuation, and many other important matters.

City and Suburbs are One Community

The interdependence of one municipality on the others must be recognized. We really constitute one large community. The present boundaries are entirely political and arbitrary. A large proportion of those living outside the city limits work within and spend most of their earnings in the city. When transportation is extended to the outskirts the tendency to live in the suburbs will increase. This is the natural desire of most citizens and no artifice is capable of stemming the tide. Indeed health authorities usually advocate the desirability of living in the country for the benefit of the rising generation. We must also recognize that insanitation in the outskirts is a menace to the city dweller, especially where movements of the people in and out are pronounced. Disease is not usually revealed until after much danger of contagion or infection has been caused.

Housing and Town Planning

Moreover, Greater Toronto's future depends largely upon its attractiveness for new industries and the expansion of the old ones. One attraction is a sufficient supply of contented labor. A generous and permanent pay roll is an asset highly desirable to encourage but comfortable and sanitary homes, with facilities to reach them, constitute a remarkable incentive to local industrial and civic development.

Mr. G. L. Pepler, the chief town planning inspector under the British Ministry of Health, stated recently that "it was notable that all save one of the commissions on industrial unrest set up during the war attributed a considerable share of the unrest to conditions that existed only because of past neglect of town planning," and that "we should at least always begin by setting out the ideal however far short of it local difficulties may ultimately cause us to reach."

Plan Ahead for Unemployment

The advantage of planning ahead of the immediate possibility of execution should be evident to all

public men, so that when emergency occurs useful work may readily be organized for the unemployed; not work hastily devised to find men a job but of permanent value to the community. The writer has advanced this opinion for many years.

Control of Subdivisions

A most important feature of town planning in connection with public utilities is the subdivision of land. In the past, subdivisions have often been made without regard to public usefulness. Streets were sometimes planned where they could not be constructed. Through connections were often neglected. No provision was made in some valleys for sewers in the streets. Cemeteries were laid out without cross streets. The repetition of these disabilities will probably be avoided but this is not sure. It would certainly be an advantage to have contours submitted with the plans of proposed subdivisions. Otherwise it is not clear how a recurrence of these defects can be obviated. The contours should not be confined to the subdivision only, but to some distance outside the limits of the area.

A REGIONAL PLAN FOR NEW YORK

On the initiative of the Russell Sage Foundation, organized for the improvement of social and living conditions, and with the assistance of interested citizens a regional plan is now in course of preparation for New York city and the region within a fifty mile radius of Manhattan. The composition of the committee chosen to carry out the work and the extent of the scheme will indicate that some of the foremost students of the science of city building in the United States have satisfied themselves that town planning in its widest sense is not only an imperative need of cities but that the movement can not be logically confined to any city limits, but must also stretch out to the region around the city in order to conserve the benefits that will follow the town planning of the city.

Zoning and planning of towns and cities in the United States has received such impetus by the success of certain experiments that it can not any more be arrested. The financial credit of cities is now involved with town planning activity. Manufacturers are deliberately choosing cities for settlement that have zoning ordinances because they have discovered that there they are most likely to find contented labour as well as adequate facilities to carry on their own work. Real estate agents who originally were the strongest opponents of what they considered interference with the rights of private property are now ardent advocates of town planning because they have

realized that town planning is the best means ever conceived for stabilizing and conserving property values.

The report of the housing and town planning division of the Commonwealth of Massachusetts has this to say about town planning:

Town planning is one of the greatest issues in the United States to-day. It is no longer to be regarded as a fad, but is an important phase of municipal activity. It is an attempt to plan ahead, that the growth of the community may be orderly and may bring comfort and convenience to all citizens. The tendency of the people to gather together in small areas has brought with it real problems. Health and order and civic welfare will not come of their own accord. They may be planned for wisely, and the problem of achieving them grows as the community grows.

The civic problem of to-day is to provide for all citizens—not just a favoured few—opportunity for normal living conditions, with sufficient light, air, sanitation and room for each individual, with provision also for recreation, education and aesthetic development. This is the ultimate aim of town planning. The haphazard growth of cities has resulted in the necessity of replanning many areas, a remedial method often attended by great opposition. This opposition must be overcome before much can be accomplished. Education is therefore a necessary part of town planning work.

The city of New York has had a zoning ordinance for some years and abundant evidence is available to show that certain districts that have been reserved for residential purposes only have benefitted enormously since homeseekers and homemakers may now have the assurance that when once they have made a home its value will not be destroyed by contiguity of incongruous building.

And no sooner is the victory for town planning won than the region looms up and demands attention. It is then seen that to plan only for the built up area and a small ring of surrounding country is not enough since the problem of arterial roads, railways, water supply and sewerage can only be efficiently and economically solved by reference to the region and that outlying districts that are growing up without public services are generating expensive problems which sooner or later will fall upon the city for adjustment.

The New York plan committee point out that in the original planning of Manhattan Island in 1811 provision for open spaces was deliberately restricted on the ground that the island was surrounded by water and that land was even then becoming dear.

The planners, guided by certain "principles of economy" created problems of congestion that have proved incalculably wasteful to business and human life.

These "principles of economy" applied to Manhattan Island in 1811 have yielded their logical and disastrous harvest of congestion and confusion in 1922. Embraced by "those large arms of the seas," rigidly bound to a street scheme designed in 1811, Manhattan has leaped into the air; it has tunneled and bridged the rivers; it has thrust out its transportation arms until men and women travel fifty miles to their daily labour in the city; until the great area of which Manhattan is the centre is in 1922 the home of no less than nine millions of people. Deep-seated structural defects leave masses of this population in an environment ill suited for human happiness and welfare. Traffic in existing streets is congested to the point where it places intolerable burdens upon commerce and endangers human life. Although the public, the liberal press, the engineering and artistic professions have repeatedly voiced the need, there exists no comprehensive regional plan of New York and its wide environs. Many admirable local plans have been developed, but no inspiring vision of the far future guides us in our present expenditures of money and of civic effort. Without a guiding plan, what of New York one hundred years hence? Momentous decisions are being constantly made, decisions that are local, piecemeal and unrelated to the larger trends. The time has come for unified planning in the interest of the whole people.

The committee will propose no abnormal expansion of public expenditure. With a wisely conceived plan public funds that will be expended in any event can be directed into projects of permanent constructive value: without a plan millions are likely to be wasted in desultory or ill-considered public work.

Before making their plan the committee have had a group of specialists working on the problems for more than a year, with Nelson P. Lewis, former Chief Engineer of the Board of Estimate and Apportionment of the city of New York, in charge of the physical survey and Edward M. Bassett and Frank B. Williams dealing with the legal aspects of the project. Other specialists are studying economic and industrial features and the important matters that come under "social and living condition". At a special meeting held in May last speakers of national standing such as Elihu Root and Herbert Hoover, who among many others have become "deep-

ly interested in the high cost of not planning", spoke strongly in favour of the scheme. Herbert Hoover stated:

The enormous losses in human happiness and in money which have resulted from lack of city plans which take into account the conditions of modern life, need little proof. The lack of adequate open spaces, of playgrounds and parks, the congestion of streets, the misery of tenement life and its repercussions upon each new generation, are an untold charge against our American life. Our cities do not produce their full contribution to the sinews of American life and national character. The moral and social issues can only be solved by a new conception of city building.

The growth of industry since New York was originally planned presents a host of new problems. The cost of distribution of necessities within the boundaries of the city increases each year until to-day the congestion, the inadequate system of terminals of transportation and commodity distribution generally tax New York with ten or fifteen per cent upon the cost of living above more adequately served centres. Many of our industries are seasonal. If we are to secure high living standards and to gain in national productivity, these industries must be so interlocked as to give more continuous employment. The fact that New York has at all times the largest proportion of unemployment of any of our cities is due partially to this ill adjustment. New York is the gateway of Europe into the United States and the dumping of great hordes of people into our slums is a poor introduction to Americanization. One part of such a plan must be a realization of each economic group in the community as to its function to the whole great community of which it is a part. With this in mind, residential districts whose interests centre largely around low cost of living and educational and recreational facilities would see their interests in better means of distribution and the development of public utilities. The manufacturing districts must find not only better aligned transportation but co-ordination to residential areas which can be developed upon human lines.

Elihu Root said:

For fifty-seven years now I have lived on the gridiron like St. Lawrence, on that gridiron laid down upon this island by the commissioners of 1811 who arbitrarily laid out our rectangular streets up and down and across the island without any reference to the topography of the land, and I have seen the city grow from less

than a million to its present enormous proportions. It isn't as pleasant a place to live in as it was. With the growth of the city has come great crowding, most uncomfortable crowding. The conditions under which men and women get to and from their work in the morning and evening are most disagreeable, hardly decent, and in the business parts of the city it is difficult to get light and air and even steamage way through the streets. It isn't only there; it is in parts of the city where the greater portion of the population live that the conditions are more distressing. I have been in the habit of saying that I do not think one can obtain a virile and dominant race where the children have paving stones between themselves and the earth.

This project is in some degree to ameliorate those conditions for the future. Not only is life in business overcrowded and hampered, but the conditions of distribution making living exceedingly expensive. New York is no place to live for any one with small means. Most extravagant incomes are necessary to enable any one to live here now as well as a person of very small means can live in one of our smaller towns.

In discussing the plan *The American City* once more states the argument that in every growing city public money will be spent on public improvements and that it is the best economy to spend this public money in accordance with a comprehensive plan:

Of course the cost of solving such a problem will be very great, but experience everywhere has demonstrated that the cost of not solving it has been and will continue to be much greater for if the figures of the engineers are not too conservative the district will have a population of over 37,000,000 by the year 2000. The point is, that the money for improvements will be spent anyhow, whether there is a comprehensive plan of guidance or not. If, however, there is no plan, civic improvements are undertaken belatedly or at haphazard and at intervals have to be replaced, re-organized to meet developments not provided for, or expensively modified in one or another hundred ways. Funds expended unnecessarily and without due consideration would provide for this realization of a sound plan for any city within a decade.

The application of all this to the metropolitan regions and the large cities of Canada is too obvious to require expansion.

Mr. Thomas Adams has been commissioned to prepare a regional plan for West Middlesex, England. The work is expected to cover two years.

MODERN CITY PLANNING

Mr. Thomas Adams, the well-known town planning consultant, has written a brochure of 20 pages on "Modern City Planning" which has been published as the June issue of "The National Municipal Review", 261 Broadway, New York, at the small cost of 50 cents. Within the limits it is a wonderfully concise and practical compendium of town planning philosophy and town planning practice. Based as it is upon an unrivalled experience in the methods of modern town planning both in Britain and on this continent its service to professional town planners and to the increasing number of students of the movement all over the world should be very considerable. As the work is a sociological plea for scientific order in the building of towns and cities on the ground that better order will promote human efficiency and human welfare so also is it a powerful plea for scientific order in the practise of town planning itself.

The elementary view of town planning, that it is confined to mere embellishment of a city, occupies the minds of many civic authorities, journalists and welfare workers still and there is constant need of re-statement of the fact that town planning goes to the roots of social life in all its manifold activities, but more especially industrial activities, which are the common causes of the human conglomerations called towns and cities, and seeks to order and regulate these activities so that they shall not swamp and degrade the human life upon which they depend for efficiency and success.

The Philadelphia Chapter of the American Institute of Architects recently stated that an industrial system or even any particular industry which fails to make possible adequate shelter, food, clothing and recreation for its operatives is unworthy to exist. No sincere student of modern city life can overlook the fact that the industrialism of the last century has tended to crowd the masses of the workers into congested districts where light, air, amenity of surroundings and room to live have been denied as the rights and necessities for wholesome living. The town planner says that these conditions can be changed and remedied by the scientific planning and ordering of a town and that the time has come when this work should be undertaken as the only cure for the social plague of slum dwelling that is wasting the life of the nations.

Within small compass and at small expense there has been nothing in recent literature that opens up so well this broad view of the functions of town planning.

A Comprehensive Plan

The first duty is to define a programme of

what can be practically done and to avoid fads. One party will be interested in playgrounds, another in civic centres and beautification generally, another in what is called "zoning" for the purpose of stabilizing real estate values, another in traffic and another in housing. With all the special pleaders for different parts of of a plan there will be constant difficulty to maintain a proper proportion and to look at the city as a comprehensive undertaking. The usual difficulty in getting a comprehensive plan is due to the lack of appreciation of the reciprocal relations between different factors in city development.

To Regulate the Use of Land

The main consideration, according to Mr. Adams, in planning a city is the regulation of the use of land for different purposes such as industry, dwellings, agriculture, open spaces and recreation.

The services which we require to make industry and homes prosperous and wholesome are (a) good sanitation (drainage and water supply), (b) convenience for transportation by railroad, waterway, etc., including railroad lines and terminals, (c) power and light, (d) communication by road including the major street plan and adequate provision for trolleys and vehicular traffic, (e) zoning or delimiting of areas to regulate the kind of use and the density and heights of buildings on the land, (f) the civic features or monumental structures which express the civic spirit of the community, (g) the parks and recreation grounds and the placing and grouping of schools and churches to serve essential social needs. No plan should be prepared which does not take into consideration these six groups of services, all of which are essential for efficiency and economy.

Devolution of Planning

The devolution of modern planning from the region or large metropolitan or industrial area to the small village is indicated as follows:—

1. *The Region.* Comprising metropolitan areas or any large industrial or mining area having a distinctive character or a common centre, consisting of several municipal areas, or parts of such areas.
2. *The City.* The administrative areas of an incorporated city.
3. *The Town.* In general a small city incorporated as a town.
4. *The Township or Rural Municipality.* A subdivision of a county, perhaps including small towns and villages.
5. *The Village.* Small populated place

not having reached the status of a town.

What is called city planning and town planning may be said to have to do with one of these kinds of areas. It is important that study be made of regional areas as it is only by the study of such areas that there can be a proper appreciation of the distribution of industry and of the interdependence of town and country. We hear much of city planning and something of country planning, but what is most wanted is the planning of the town-country which is comprised in the region.

The planning of the small growing towns and villages and the regional areas in which they are situated presents most scope and opportunity for effective work.

The importance of a good transportation system and a scheme of zoning for the disposition of various kinds of buildings is so obvious that some town planners, who wish to be considered very practical, are inclined to neglect other features such as the development of a parks system or postpone consideration of them to an indefinite future. Mr. Adams believes that the distribution of work should not be made among the different parts of a city plan but that the earliest endeavours should aim at a comprehensive plan in which all important factors should receive consideration.

Procedure in Planning

The order of procedure suggested is,

1. Reconnaissance survey of the city and surrounding region;
2. Tentative skeleton plan of the region based on the survey;
3. City survey;
4. Complete working plan of the city adapted to the law of the province.

The first practical work to be done in planning a city or town, after the appointment of a town planning commission, is to collect copies of the existing topographical and subdivision maps and other data available. Where federal maps on a scale of one inch to one mile are available, they should be obtained to show the city and surrounding region.

A second map should be prepared showing the city and adjacent metropolitan area or urban zone up to from three to five miles of the city boundary. This should be on a scale of 1,000 to 2,000 feet per inch. The main street and highway system, waterways, railways and other broad features in the development of the area should be drawn on this small scale map.

A map of the city area on a scale of from 200 to 400 feet to one inch showing the buildings and topography within the city should then be pre-

pared, similar to the topographical survey map of the city of Baltimore. This should show the existing streets and blocks as accurately as possible and the levels of the land in the form of contour lines at five-foot intervals. With the aid of the insurance maps and special surveys, all buildings and other physical features should be added to this map. If this map is properly prepared it will give as good an idea of the distribution of the population as can be obtained in any other form and, at the same time, show the density of distribution of the buildings. It is more desirable to spend time on getting the existing buildings shown on the maps than on working out maps of population densities which are of comparatively little value in diagrammatic form when the character of the buildings is not shown.

There will now be three maps: Map No. 1 of the region, one mile to one inch; Map No. 2 of the city and surrounding urban zone, 1,000 to 2,000 feet to one inch; and Map No. 3 of the city, 200 to 400 feet to one inch. All subdivisions in the metropolitan area as well as in the city should be shown in broad outline on Map No. 2. On this map it is intended that a skeleton and tentative plan of the main highways, railways, parks and parkways (existing and proposed) should be drawn.

Where a city can afford the expense it will be of great value to have a special topographical survey map made of the whole city. Such a map will be of special utility in cities where there are considerable areas of undulating land. In some cases where there are exceptional difficulties caused by hilly ground, an accurate and complete survey of the city or part of it will be essential.

Map No. 3 will show topographical buildings, streets, boundaries of blocks and railways within the city and from this map Mr. Adams would make coloured cartoons as follows:—

- Map 3 (a) Transportation map, showing existing railways, stations, waterways and harbors, markets, etc.;
- Map 3 (b) Street services map, showing existing street railways and proposed extensions, water mains, sewers, power lines and different kinds of street pavement;
- Map 3 (c) Street traffic map, showing main arteries and focal points, level crossings, street railway intersections, street collision points and (if census be taken of traffic) number of points with reference to figures in report. On this map lines should be drawn in colour showing the areas within a quarter of a mile of any street railway;

Map 3 (d) Land valuation map, showing the assessed values of land in blocks at the different values per square foot or per foot frontage. Thus blocks \$5 to \$10 per square foot or \$500 to \$1,000 per foot frontage would be shown in one colour and at \$1 to \$5 per square foot or \$100 to \$500 per foot frontage in another colour;

Map 3 (e) Existing conditions map, showing the existing industrial, business and residential areas, parks and parkways, and sites of public and quasi-public buildings.

By careful presentation with a prearranged notation of colours and marking maps 3 (a), 3 (d) and 3 (e) may be combined as one "existing conditions" map.

Transportation

With these maps supplying accurate and graphic data the town planner will be in a position to proceed to the preparation of a comprehensive plan. His work will take the form of proposals, possibly for the improvement of the transportation system, which will involve study of railway trackage, union terminals, removal of grade crossings, approaches to stations and the like; problems of arterial highways and the widening of existing streets, bridges, subways, by-pass roads, rounding of street corners will be discussed and recommendations made. The street system will be classified under main trunk arteries, major and minor streets and their desirable widths and the building lines to be adopted; the study of sewerage and water supply systems will also be involved.

Zoning

The next stage will be preparation of a zoning scheme to regulate the use, height and density of buildings. The classification of uses suggested by Mr. Adams is:

- (a) Heavy industrial and general purposes areas;
- (b) Light industrial, including warehouses;
- (c) Business, comprising retail trading, offices, banks, etc.;
- (d) First residential district comprising detached and semi-detached houses;
- (e) Second residential district comprising in addition to detached and semi-detached houses, duplex houses, apartments and small neighbourhood business centres.

Mr. Adams is of opinion that residences should not be excluded from (b) nor light industries from (a) public garages and billboards should be excluded from (d) and (e) by implication. Public build-

ings, churches, schools and houses used for professional purposes should be permitted in (b), (c), (d) and (e) but the areas in which they are allowed to be erected in (d) should be definitely defined on the plan. It might be arranged, if so desired, to exclude public buildings, churches, etc., from district (d), in cases where a majority of the inhabitants so decided.

It is suggested there need not be any restriction of heights in business districts subject to their being adequate open space and width of street surrounding the building. Height should not be governed by an arbitrary figure of a number of feet or number of storeys but by the relation between the open space areas adjacent to the building and the height. Different percentages should be adopted according to local conditions. Where the area of lot occupancy in a business district is 100 per cent, part of the building should not be allowed to exceed one storey, and rear entrance from a back street or lane should be required. In the case of industrial and business buildings 90 per cent might be permitted to go up to a height equivalent to the width of the street where they front. Beyond that height the building should be required to be set back as it increases in height. In residential districts the heights should be limited to two and a half or three storeys in (d) and six storeys in (e) but in the latter case the question of the amount of open space surrounding the building would determine the height permitted. The ideal is to secure a 45 degree angle of light to the front and rear walls of all buildings.

Parks and Architecture

The third stage is the planning of parks and open spaces, water fronts, architectural features, grouping of public buildings. On the question of civic centres Mr. Adams remarks:

The civic centre needs of be planned in connection with the other physical features of the city. In a sense, it should be subordinate, because of the expense of constructing monumental buildings. It is bad for the public interest to erect extravagant structures. Most cities lack beauty, not because they lack public buildings but because of an untidiness arising from want of care in controlling the surroundings of the buildings they have. There is no reason, however, why a beautiful building should cost more than an ugly one. It is simply a case of getting the right kind of advice. The surroundings of the building are just as important as the building itself. They should be spacious, but not to an extent which will dwarf the building. There should be a relation between the space and the height and bulk of the building.

One important problem to be always considered in planning is the proportion of cost of improvements which should be borne by the city at large and the owner of the land. The Somers system or real estate valuation suggests the spreading of the cost on the basis that the frontager should pay the total for a sixty-foot street. This, however, is rather high. A forty-foot street is sufficient to meet the local needs of residential areas, and sixty-foot of industrial and business areas.

Corner Treatment

Architectural amenity can often be attained by careful planning without any cost at all. Varieties of development, such as quadrangles, squares and crescents, can be made to relieve the monotony of repeated lines and both new construction and reconstruction of buildings may contribute to this end. In poor architectural treatment corner buildings often present a gaudy front elevation on one street and a characterless side elevation on another street. "Nothing condemns the orderly rectangular subdivision so much as the ugly effect which is produced by corner houses having their gables on the side streets with long flankages not occupied by buildings." These architectural misfortunes can easily be avoided by the exercise of a little architectural imagination and the town planner can arrange corner lots to promote artistic treatment and so contribute to the civic beauty which can be enjoyed by all.

Subdivisions

In new subdivisions the planting of trees should be a study in itself and recreation spaces should be allowed to the extent of one acre for every one hundred houses. In certain of the provinces of Canada which have a town planning act one acre in ten is set aside for open spaces. Buildings should not be erected upon marshy or flooded land but these areas often provide excellent breathing spaces.

Suburban Development

On the important subject of suburban development Mr. Adams remarks:

Often the worst building development takes place in the rural areas surrounding large cities. The greatest difficulties of obtaining effective control of highways, sanitation and of land development are probably to be found along the fringes just over the boundaries of cities. The rural municipality, very often having the outlook of a purely farming population, regards the suburban excrescence of the city as an undesirable encroachment, even if it has the redeeming feature of bringing some added revenue. The rural council has not been accustomed to deal

with that class of development and it leaves it uncontrolled or governed by rural standards, quite inadequate to meet urban conditions. On the other hand, the city looks upon the overflow into the rural territory as something to be discouraged because it naturally does not favour the loss of its inhabitants. For that reason, it avoids extending its water supply or its sewerage system to the outside areas when it can do so.

Thus the selfish interests of the city and of the country mean the neglect of the very territory that most needs planning and the laying down of the soundest conditions of development.

To make matters worse, the extension of cities takes place in a haphazard way and on no definite principle with the consequence that the township authority suspends improvements as long as it can in the hope that it will be able to escape its obligations altogether, while the city authority defers as long as possible any movements for extension.

The absence of a uniform system of assessment is a further cause of trouble and it is round the question of assessment that the final battle is usually fought when the question of extending a city area comes up for consideration. The final result is usually a compromise giving the inhabitants of the rural area enjoyment of a fixed assessment for a period of years and saving the city some money for development. The general interests and welfare of the community are ignored in a struggle for the best financial terms. The making of regional surveys will perhaps help us to arrive at some better method of readjusting municipal boundaries in the interests of both the city and the adjacent rural territory.

Agricultural Belts

The development of agricultural belts and productive parks around towns and cities is one of the new features of modern town planning discussed by Mr. Adams with much cogency and persuasiveness:

The productive agricultural belt or wedge will be as essential as the public park or playground in the city of the future. If the large modern industrial city is to be preserved from decay and disintegration when it grows still larger, it must develop a system of lungs on a greater scale than hitherto, and productive parks are more economical, and practicable for this purpose than recreation parks. The needs of the population for open spaces and nature is greater than their needs for recreation space or than is practicable to provide on a non-productive

tive basis. That is the reason for the significance of the Garden City plan with its agricultural belt. Many years may elapse before this idea takes a full hold, but it is not conceivable that future generations will be so blind to the evil tendencies of unrestricted expansion of congested urban areas as to reject the only effective solution. The control of the development of land is essential to this solution of the problem of congestion. Large areas of land near and within cities can be more economically used for agricultural production than for building, because their levels are such as to make the cost of conversion into building land and construction of local improvements excessive in comparison with the values they create for building purposes.

Regional Survey

An appendix gives an outline of the problems to be studied in regional survey. The intimate relation of the town to its region presses more and more upon the consciousness of the town planner and both in Britain and the United States elaborate schemes are being considered for regional planning.

NEWS AND NOTES

Town Planning Situation in Ottawa.

The Ottawa city council has recently granted the sum of \$600 to the Town Planning Commission for the special purpose of starting work on the zoning problem of the city and this sum appears to have justified the appointment of a zoning officer who will work under the direction of Mr. Noulan Cauchon, the chairman and technical adviser to the commission. The appropriation of such a sum for such a purpose seems only susceptible of the remark that everything must have a beginning. The mayor and controllers expressed themselves as unanimously in favour of starting the work, after the chairman had presented the case for zoning. Mr. Cauchon emphasized the "dollars and cents" argument that a zoning law would stabilize property values which maintain the margin of security upon which mortgage loans rest and that the jumbling of incongruous buildings depreciates property values and so reduces assessments and the revenues of the city.

The Capital city would seem to be drifting into town planning over the rocks of antiquated opposition. A scheme for the opening up of an important main artery and driveway in Lower Town, which could have been carried through at exceptionally small cost and as circumstances permitted, without any immediate outlay and which would have provid-

ed a magnificent driveway for all time connecting with a main artery projected to extend for miles through the heart of the Capital to suburban areas east and west, has just been thwarted by the decision of the council to place a new building for public baths in the line of the improvement. Meanwhile New York is busy with a regional plan that is intended to cover an area of a 50 mile radius from the centre and a population of 8,976,856—that is, equal to the whole population of Canada.

Mr. Cauchon has in course of preparation a zoning memorandum which sets forth the principles, regulations and symbols intended to serve in charting the existing status of the areas to be zoned and to determine the permissible uses of land in these areas. The system adopted appears to present some novel features tending to simplification of the problem of symbolization in zoning. Sooner or later there must be a movement toward a standard system of symbolization in zoning maps. Such a standard zoning map for Canada would be a labour-saving device of the greatest importance. Such provinces as Saskatchewan and Manitoba, where provincial town planning executives are definitely working to a programme, might well consider the publication of a model zoning map with a standardized symbolization. It is hoped to publish Mr. Cauchon's system with the next issue of *The Journal*.

Zoning Powers in Ontario

In the villages, towns and cities of Ontario zoning may proceed by the decisions of councils, under the following recent amendment to the Municipal Act.

1. The Municipal Act is amended by inserting after section 399 the following as section 399a :—

399a. By-laws may be passed by the councils of cities, towns and villages, and of townships abutting on an urban municipality;

Establishing restricted districts or zones.

1. For prohibiting the use of land or the erection or use of buildings within any defined area or areas abutting on any defined highway or part of a highway for any other purpose than that of a detached private residence for one family, or such further or other purposes of a more general nature as the by-law may provide.
2. For regulating the height, bulk, location spacing and character of buildings to be erected or altered within any defined highway or part of a highway, and the proportion of the area of the lot which such building may occupy.

Glengarry War Memorial

The local committee of the Glengarry War Memorial some time ago placed the work in the hands of Lieut.-Col. C. P. Meredith (Member of Council, T. P.I.C.) and it is expected that the memorial will be unveiled some time in the autumn. The site selected is a rocky boulder-strewn ridge characteristic of the county of Glengarry. It is situated in a large park-like pasture land on an acre of ground and on the side of the old military road built through the county by Sir John Colborne about ninety years ago. It is on the outskirts of the town of Alexandria and the monument when built will be visible for many miles.

The memorial will take the form of an octangular cairn about fifteen feet in diameter surmounted by a Celtic cross, the whole standing about thirty-five feet high above the ridge. The cairn will be built from the field stones gathered by the first Glengarry settlers who were originally old highland regiments brought out by their priest from the north of Scotland.

The stones will be roughly squared to show a rocky face and thus give to the cairn a monumental appearance. The base of the cairn will be of a light grey Stanstead granite surmounted by three steps from which a cross will rise twenty feet. The granite will be finely hammered and not polished.

In the base of the cairn a bronze tablet will give the names of the one hundred and seventy-three Glengarry men who gave their lives in the Great War. The tablet will be fixed on a panel of Stanstead granite and will bear the inscription:

1914—1918

To the Glory of God

In Memory

Of the Men of Glengarry

Who gave their lives in the Great War.

At the base of the inscription will be the following lines from Laurence Housman:

They shall not grow old, as we that are left grow old:

Age shall not weary them, nor the years condemn;
At the going down of the sun and in the morning
We will remember them.

Below this will be the following legend in English, Gaelic and French:

I remember, Ha cuimhuich again, Je me souviens.

Around the monument will be a boulder retaining wall measuring 173 feet in each direction and

following the general contour of the ridge. This will be built also of stones from the Glengarry fields and will be left dry and ramped inwards to give stability. At the base of the wall will be planted the arbor-vitae, and within the wall in the corners will be massed the common juniper, a low-growing evergreen which will eventually clothe the upper edge of the wall.

In the rear of the cairn will be placed irregularly nine hard maples signifying the nine provinces of Canada to which the men of Glengarry spread and from which they came back to enlist. Around the sides and on the top of the mound will be sunk ten or twelve boulders rising about eighteen inches above the soil to serve as benches or seats for visitors. The approach to the monument from the main road will break through the ramped stone wall by a flight of some half dozen rough flag steps and a few stone flags will be distributed on the grass to serve as a pathway to the monument.

The chief idea of the architect is to make the memorial as characteristic as possible of the men of Glengarry and, in view of the neglect that is often the fate of such memorials after one or two generations have passed, to make the Glengarry monument and all its contributories as indestructable as is humanly possible.

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Public Garages.

The city of Cleveland has put \$30,000,000 into an elaborate scheme for a Mall since the idea fired the civic imagination twenty years ago. But the project is still uncompleted. Mr. Francis S. Swales, of Yonkers, N.Y., former consulting architect for the Cleveland public hall and Member of the Town Planning Institute of Canada, has put forward a proposal to the Cleveland authorities for the creation of a public garage and parkway under the Mall by which he believes a conspicuous public need will be met and a civic revenue created—estimating the use of the garage at 400 to 500 automobiles—of \$81,000 a year.

* * * *

Zoning Primer

A zoning primer has been published by the United States Department of Commerce, Washington, D.C., which may be obtained on application to the department for five cents. It sets forth in concise fashion the advantages of zoning, methods of procedure and useful data as to what has already been done.